

 **KENWOOD**

DC-20

Sales Manual



MINI-COMPONENT SYSTEM

Product Policy

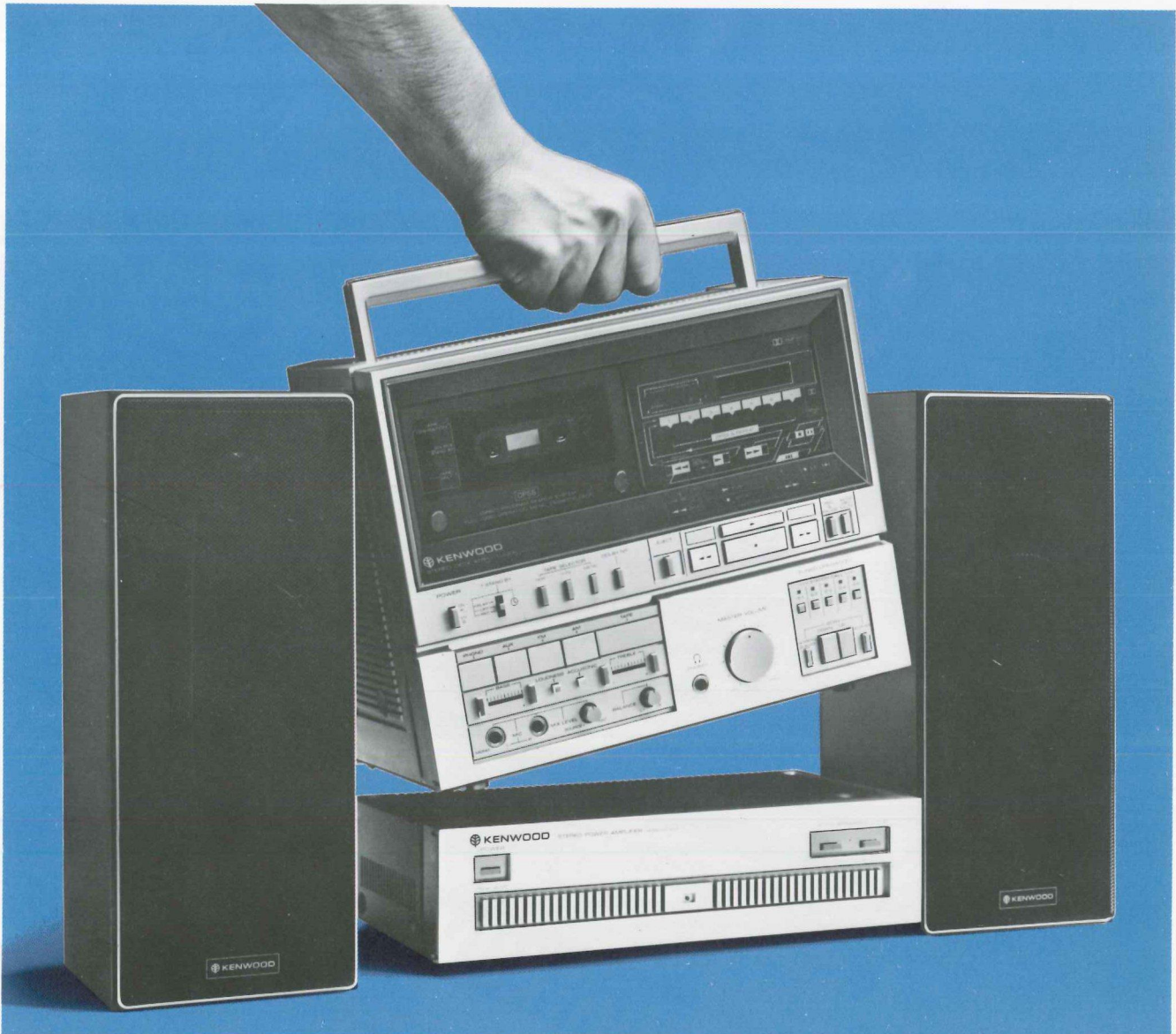
Today's consumers are most likely to approach audio in a much more relaxed way than formerly. They look for not only good sound, attractive styling and easy operation, but also for a more effective and pleasing use of living space. The freedom to take their favorite music on vacation is also a primary concern.

However, when it comes to quality of sound reproduction, many of the new mini-systems fall far short of expectations. For the portable cassette-radio — descendent of the 50's transistor radio — sound quality is of little concern. But there are many impressive-looking mini stereo systems too that simply do not put out the quality of sound the hi-fi fan is accustomed to. They often have inadequate power

output and speakers as well as inferior tuner and tape performance.

The new Kenwood DC-20 is therefore designed to fill the gap between true hi-fi sound on one hand and space-saving miniaturization and portability on the other. It incorporates audio circuitry designed by some of the audio world's most experienced engineers, and computerized automatic systems; and it offers the portability that allows the system to be taken out of the home and away on vacation.

Here at last is a "mini hi-fi system" that is perfect for today's alert but relaxed, casual but demanding consumer.



Sales Points

- **Genuine hi-fi performance**
- **Ideal as second hi-fi system at home**
- **3-way portability**
Full system portable using any AC line outlet or operating on vehicle or boat battery by using the AD-15 Adaptor, or supplied dry battery pack.
- **Detachable main power amplifier**
- **Detachable high-performance speaker system**
Rigid low-resonance enclosure. Cassette-tuner core has built-in monitor speakers.
- **Full-size floor type speaker system can be fully driven by power amplifier.**
- **Computerized automatic music-search system**
7 selections forward, 6 back (See Automatic Features).
- **7-cycle automatic repeat of a selection**
(See Automatic Features)
- **Continuous full repeat of entire cassette side**
(See Automatic Features)
- **LED operations display panel**
And LED "dot" countdown display.
- **Accurate quartz synthesizer tuning**
- **Digital scan or manual tuning**
- **Direct tuning via memory presets**
10 channels, 5 FM + 5 AM.
- **Metal tape, Dolby* NR and Accusonic stereo enhancer switch**

Key Specs

DC-20X Cassette-Ampli-Tuner

Cassette Deck section

- Wow-and-flutter **0.05%** (WRMS)
- S/N ratio **61 dB** (Metal, Chrome, Dolby on)
- Frequency response **25Hz – 16kHz** (Metal)

Tuner section

- FM usable sensitivity **13.2 dB** (2.5 μ V)
- FM S/N ratio (Stereo) **62 dB**
- FM THD at 1kHz (Stereo) **0.5%**
- Stereo separation **36 dB** at 1 kHz
- FM selectivity **55 dB** (\pm 400 Hz)

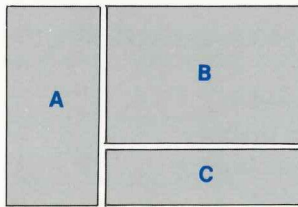
DC-20P Power Amplifier

- **Power output 20W p/ch min. RMS, both channels driven at 8 ohms from 40Hz – 20kHz with no more than 0.1% total harmonic distortion**
- Phono S/N ratio (IHF-A) **70dB** at 2.5mV
- Phono frequency response **30Hz – 15kHz \pm 0.2 dB**

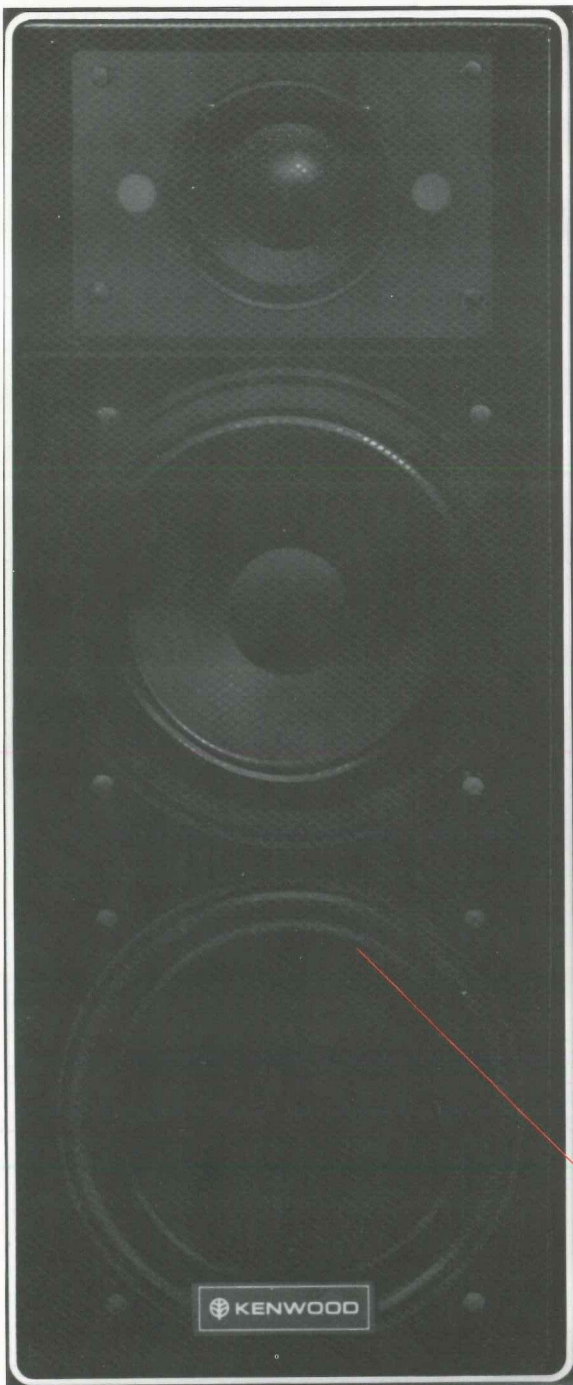
DC-20S Speaker System

- 2-way 2-speaker system
- Frequency response **70Hz – 20kHz**
- Sensitivity **87 dB** at 1 meter

Operating Features



- A. DC-20S
Speaker System
B. DC-20X
Cassette-Ampl-Tuner
C. DC-20P
Power Amplifier



1 Tape priority indicator

SOURCE STAND BY indicates tape is standing by ready for play at any time, including during broadcast listening, just by pressing the tape PLAY key. At the end of the tape, the original broadcast reception (or other source) is resumed. SOURCE STAND BY mode is activated by depressing FM or AM (or PHONO, AUX) selector keys (below). When TAPE key is selected, TAPE ONLY results.

2 Dolby noise reduction system

3 Easy tape selection and metal tape
Each tape type is automatically optimized.

4 Timer Stand-by

For connection to outboard audio timer. Operates in Play or Record modes.

5 Selector keys

Depress FM or AM keys to activate tape priority in SOURCE STAND BY mode (No.1)

6 Bass and Treble slider controls

7 Loudness switch

For a more natural sound at low volume levels.

8 ACCUSONIC switch

Creates better stereo image when listening close by.

9 Mic Mixing

With SOURCE and MIC level control. As one is increased, the other decreases.

10 2-way 2-speaker bass-reflex system

High power handling with rigid enclosure for low resonance and clearer output even from compact speakers. Enclosure is particle board covered with aluminum sheet finished in matte silver color to match the center units.

11 Power amplifier

Genuine high-fidelity performance: 20 watts per channel min. RMS into 8 ohms, from 40Hz to 20 kHz, with no more than 0.1% total harmonic distortion. Front panel selector for A, B or A + B external speaker systems. LED power ON indicator.

12 Digital frequency readout

13 LED "dot" countdown indicators

For DPSS music search or Repeat operations. LEDs illuminate and extinguish one-by-one as programs are skipped (DPSS) or as single-selection repeat cycles are completed.

14 Operation information display

For DPSS music search, REPEAT and normal directional operation, including LEDs for PLAY, FF and REW, STOP, REC & REC PAUSE and REC MUTE. Indicators flash rapidly or slowly according to operation. Operation guide panel is below.

15 REC & PAUSE key

Alternate presses activate recording or pause modes. Recording is activated by a single press.

16 AUTO REC MUTE

This key provides an automatic 5-second patch of silent recording. Useful for effective DPSS intertrack gap location, or for eliminating unwanted material while recording. One press gives 5 seconds, a second press during this interval continues with another 5 seconds etc. At the end, pause is activated. Continuous pressure maintains indefinite zero-signal recording.

17 Full logic tape control keys

Positive-action, instant response keys with professional "feel". Direct interchange between drive modes.

18 Direct tuning via memory presets

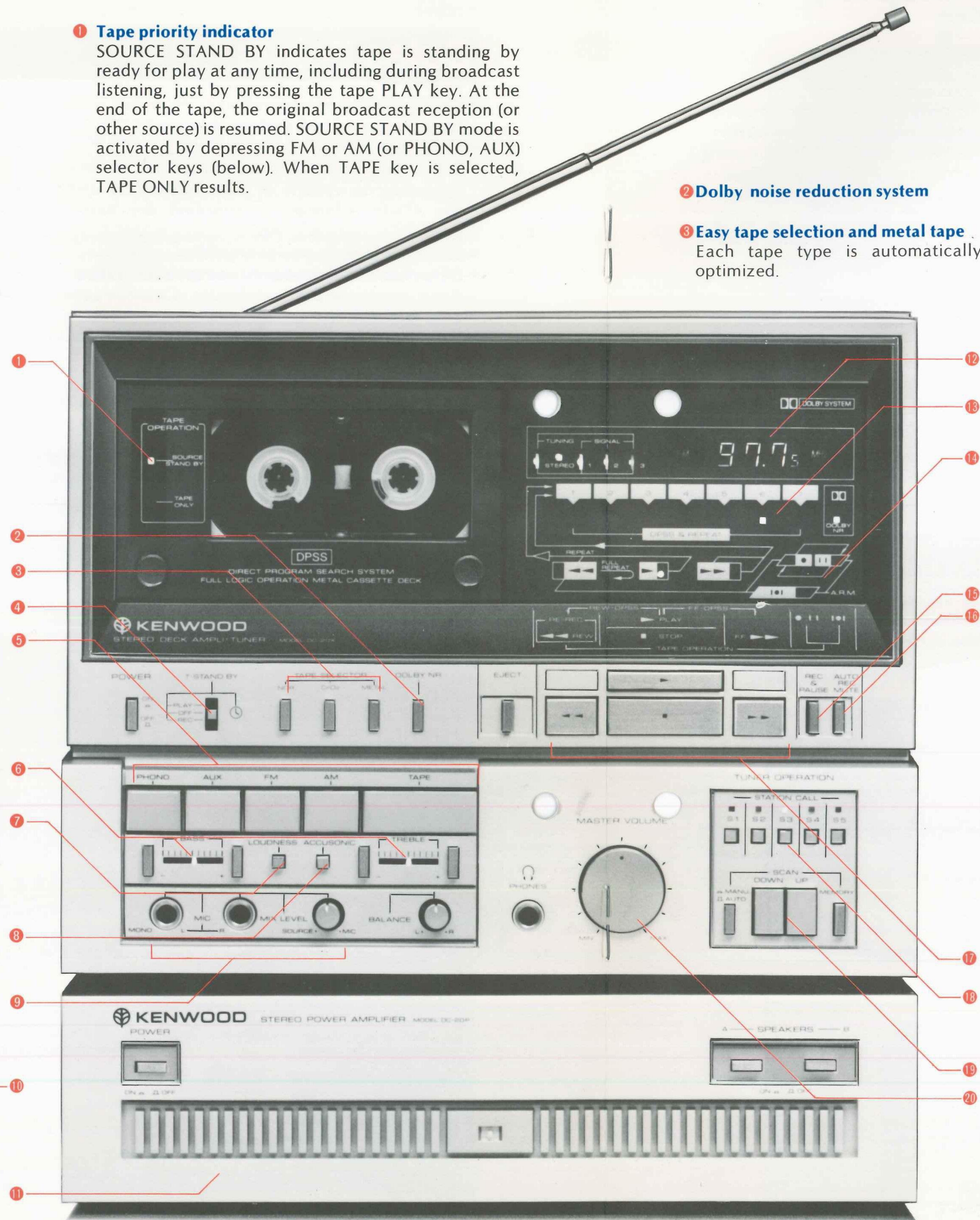
STATION CALL keys S1 to S5 with LED indicators. MEMORY key for entering stations into memory.

19 Automatic or manual SCAN tuning

In MANUAL mode, a press on a scan tuning key sends tuner up or down the band by one allocated channel step. Continuous pressure finds a desired frequency at speed. In AUTO mode, a press on a scan tuning key sends the tuner to the nearest available active station. Continuous pressure bypasses frequencies to find the first available active station after the key is released.

20 Push-lock volume knob

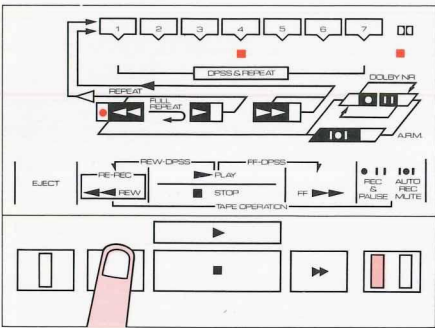
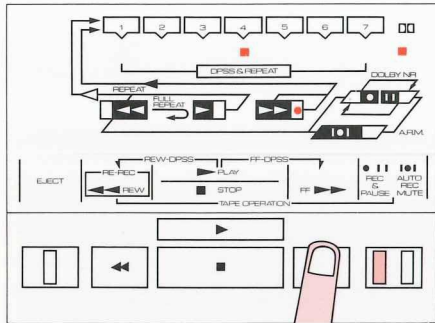
Pushes in near panel face for portable use.



DPSS/Repeat key Operation and Display Guide

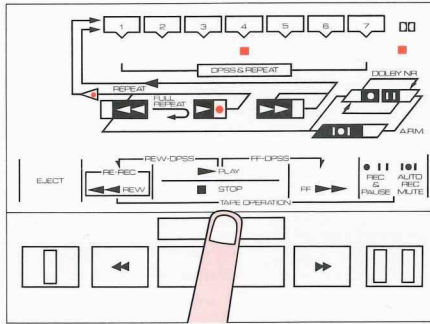
The Direct Program Music-Search System (DPSS)

This is a direct-access search system that allows the operator to play a selected music number forward or back by locating inter-program gaps and skipping selections. Up to 7 programs can be made in forward direction, 6 in reverse. In other words, to play the next selection, skipping the current one, press the FF key once. To play the preceding selection, press the REW key twice (one press plus one for the current selection). LEDs indicate the number programmed and countdown to the desired selection.



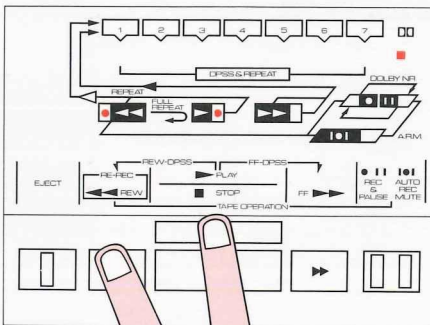
7-cycle repeat

When in playback, a repeat of the currently playing selection can be effected by pressing the PLAY key. This is possible for a total of 7 playback cycles, cancellable at any time by the STOP key. LEDs countdown the repeats to zero, each flashing slowly during playback, rapidly during rewind. When the entire repeat cycle is ended, normal play of the remainder of the tape resumes.



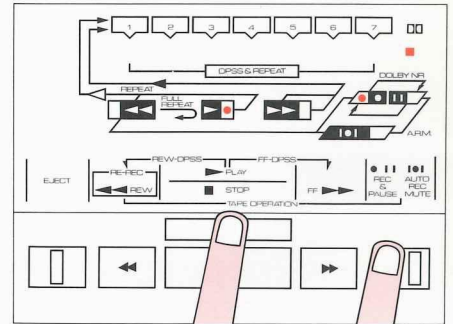
Continuous repeat of entire tape side

Activated by pressing PLAY and REW keys simultaneously and indicated by flashing LEDs. The side will be repeated indefinitely until ordered to stop by the STOP key.



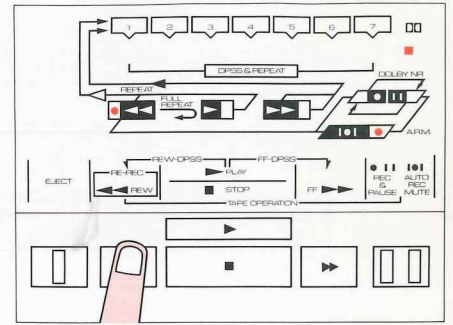
"Flying-start" recording

To start recording immediately after listening to a previously recorded passage, without using the stop mode. It is activated by holding down the REC key during playback, then pressing the PLAY key the instant when recording must be started.



Immediate re-recording

Pressing the REW key while in recording mode locates the tape at the starting point of the original recording and places the deck on stand-by.



Optional carrying cases



CC-20T

Totally enclosing suitcase size made of ultra-lightweight durable materials. With long-life shoulder strap. Either side of case opens out. Case holds entire DC-20 including speakers.



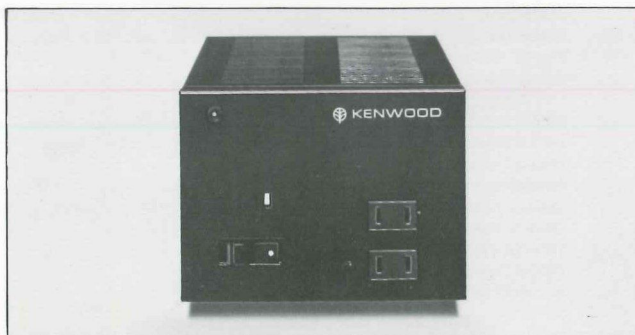
CC-20K

Semi-enclosing suitcase size of same materials. With carrying strap. Both sides of case are open.



CC-20S

Totally enclosing vinyl leather carrying case for cassette-tuner "core" without amplifier and speakers. Side vents for monitor speaker sound outlet, button-down removable front and back flaps for accessibility to controls.



AD-15

Car Battery Adaptor for DC-20

- DC-AC inverter 12-13.5V DC input, 110-120 or 220-240V output voltages.
- Functions as part of the DC-20 system.

Specifications

DC-20

DC-20P (POWER AMPLIFIER)

Power Output
20 watts per channel minimum RMS, both channels driven at 8 ohms from 40Hz to 20kHz with no more than 0.1% total harmonic distortion.
 Both Channels Driven into 8 ohms at 1kHz ... 24 watts + 24 watts
 Dynamic Power Output into 8 ohms 70 watts
 Total Harmonic Distortion rated
 output at 1kHz 0.01%
 Signal to Noise Ratio (IHF-A) 100dB
 Frequency Response 10Hz to 100kHz
 Input Sensitivity/Impedance 150mV/50kohms

DC-20X (CASSETTE-AMPLI-TUNER)

AUDIO SECTION
 Monitor Speaker 5" x 3" Cone Type Full Range Speaker
 Monitor Power Output 3.4 watts (1.0% T.H.D.) into 8 ohms
 Pre Output Level 150mV
 Rec Output Level 150mV
 Signal to Noise Ratio (IHF-A)/Input Sensitivity
 Phono 70dB/2.5mV
 AUX 88dB/150mV
 Mic 65dB/2.0mV
 Frequency Response
 Phono RIAA Response 30Hz to 15kHz \pm 0.2dB
 Tone Control
 Bass \pm 10dB at 100Hz
 Treble \pm 10dB at 10kHz
 Loudness (-30dB Vol.) +8dB at 100Hz
FM TUNER SECTION
 Tuning Frequency Range 87.5MHz to 108MHz
 Usable Sensitivity 13.2dBf (2.5 μ V/300 ohms)
 Total Harmonic Distortion at 1kHz
 Mono 0.4%
 Stereo 0.5%
 Signal to Noise Ratio at 65dBf
 Mono 67dB
 Stereo 62dB
 Frequency Response 30Hz to 15kHz (+0.5, -1.5dB)
 Image Rejection Ratio 78dB
 Alternate Channel Selectivity 55dB (\pm 400Hz)
 Stereo Separation 36dB at 1kHz
 30dB at 50Hz to 10kHz

AM TUNER SECTION

Tuning Frequency Range 530kHz to 1,620kHz (USA & Canada)
 522kHz to 1,611kHz (Others)
 Usable Sensitivity (Loop) 700 μ V/m
 Signal to Noise Ratio 45dB
 Selectivity 35dB

CASSETTE DECK SECTION

Track System 4-Track 2-Channel Stereo Recording/
 Playback
 Motor Electrical Controlled DC motor
 Head REC /PLAY Permalic Hi-B Permalloy Head
 ERASE Sendust Alloy Ferrite Head
 Wow & Flutter 0.05% (WRMS), 0.18% (DIN)
 Signal to Noise Ratio 61dB (Metal & CrO₂),
 60dB (Normal) at Dolby ON.
 Harmonic Distortion 1.0% at 1kHz, 0VU, Metal Tape
 Frequency Response
 Normal Tape 25Hz - 15kHz
 CrO₂ Tape 25Hz - 15kHz
 Metal Tape 25Hz - 16kHz

DC-20 S (SPEAKER SYSTEM)

System 2 way, 2 Speakers
 Enclosure Bass-Reflex (Passive Radiator type)
 Mounted Drivers
 Low-Mid Freq. Driver 100mm (4") Cone Type
 High Freq. Driver 25mm (1") Dome Type
 Impedance 8 ohms
 Maximum Input Power 30 watts
 Sensitivity 87dB/w at 1m
 Frequency Response 70Hz to 20kHz
 Crossover Frequency 3kHz
 Finish Aluminum sheet wrapped particle
 board with silver painted finish

GENERAL

	DC-20X	DC-20P	DC-20S
Power Requirement	60Hz, 120V (USA & Canada) or 50/60Hz 110-120/220-240V		-
Battery Drive	DC-12V (UM-1 x 8) for Memory (UM-3 x 2)	-	-
AC Outlet	-	Switched 1	-
Power Consumption	40 watts	120 watts at rated power output	-
Weight	13.7 lbs (6.2kg)	7.7 lbs (3.5kg)	5.5 lbs (2.5kg)
Dimensions W	11-13/32" (290mm)	11-13/32" (290mm)	5-1/32" (128mm)
H	9-3/16" (233mm)	3-5/16" (79mm)	12-5/32" (309mm)
D	5-29/32" (150mm)	5-29/32" (150mm)	5-3/32" (129mm)

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
 *Trademark of Dolby Laboratories Licensing Corp.

A product of

TRIO-KENWOOD CORPORATION

Shionogi Shibuya Building, 17-5, 2-chome Shibuya, Shibuya-ku, Tokyo 150, Japan

KENWOOD ELECTRONICS, INC.

1315 E. Watsoncenter Rd, Carson, California 90745;
 75 Seaview Drive, Secaucus, New Jersey 07094;
 1141 North Tower Lane, Bensenville, Illinois 60106, U.S.A.

TRIO-KENWOOD CANADA INC., 1070 Jayson Court, Mississauga, Ontario, Canada L4W 2V5

TRIO-KENWOOD ELECTRONICS, N.V. Leuvensesteenweg 504 B-1930 Zaventem, Belgium

TRIO-KENWOOD ELECTRONICS GmbH

Rudolf-Braas-Str. 20, 6056 Heusenstamm, West Germany

TRIO-KENWOOD FRANCE S.A. 5, Boulevard Ney, 75018 Paris, France

TRIO-KENWOOD SVENSKA AB. Kemistvagen 10A, P.O. Box 68, S-183 21 Taby, Sweden

TRIO-KENWOOD AG Unterboesh 6331 Huenenberg/ZUG Switzerland

TRIO-KENWOOD (AUSTRALIA) PTY. LTD.

4E Woodcock Place, Lane Cove, N.S.W. 2066, Australia.

KENWOOD & LEE ELECTRONICS, LTD.

Wang Kee Building, 5th Floor, 34-37, Connaught Road, Central, Hong Kong